

Sample Information

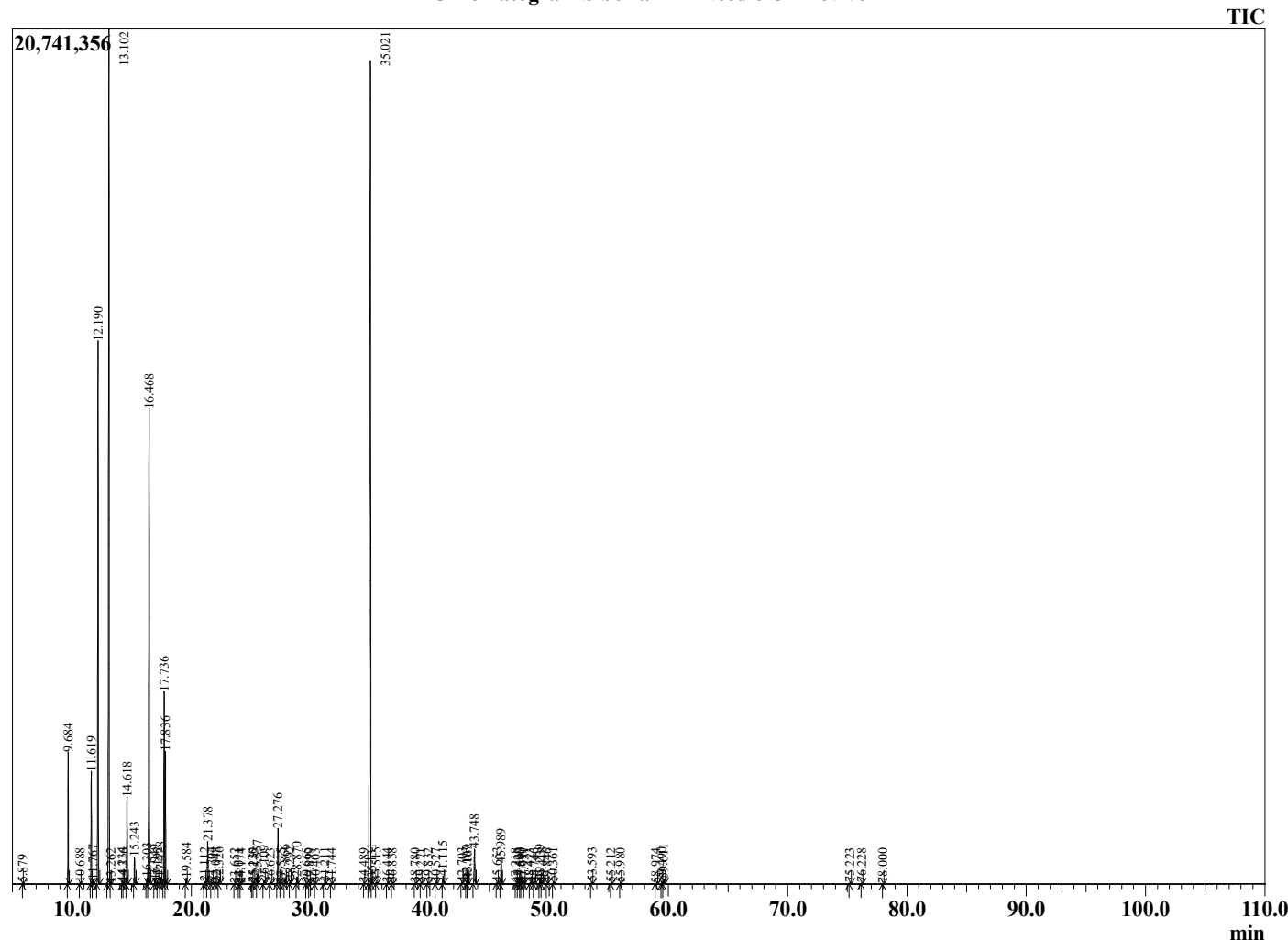
Analyzed by : Dr. Robert S. Pappas
 Analyzed : 1/25/2024 8:54:57 PM
 Sample Type : Essential Oil
 Sample Name : Siberian Fir Needle Oil Revive
 Sample ID : 1C
 Injection Volume : 0.10
 Instrument ID: : GC-4



Peak Report TIC

R.Time	Name	Area%
5.879	Toluene	0.01
9.684	Santene	2.28
10.688	Unidentified	0.03
11.619	3-Methyl Apopinene	2.24
11.767	alpha-Thujene	0.08
12.190	alpha-Pinene	11.81
13.102	Camphene	21.23
13.262	Thuja-2,4(10)-diene	0.01
14.234	meta-Cymene	0.05
14.316	Sabinene	0.01
14.618	beta-Pinene	1.90
15.243	Myrcene	0.60
16.303	alpha-Phellandrene	0.15
16.468	delta-3-Carene	11.90
16.949	alpha-Terpinene	0.10
17.192	Unidentified	0.04
17.428	para-Cymene	0.16
17.736	Limonene	4.82
17.836	beta-Phellandrene	2.95
19.584	gamma-Terpinene	0.14
21.112	Terpinolene isomer	0.05
21.378	Terpinolene	1.07
21.704	Dehydro-para-cymene	0.05
22.048	Unidentified	0.05
22.326	Unidentified	0.05
23.652	Fenchol	0.02
24.011	trans-4-Thujanol	0.01
24.174	alpha-Campholenal	0.01
25.120	trans-Pinocarveol	0.02
25.255	Unidentified	0.03
25.557	2-Bornanone	0.24
26.109	Camphene hydrate	0.09
26.623	alpha-Phellandrene-8-ol	0.04
27.276	Borneol	1.55
27.515	Unidentified	0.03
27.866	Terpinen-4-ol	0.13
28.292	Unidentified	0.08
28.870	alpha-Terpineol	0.20
29.665	Unidentified	0.03
29.899	Unidentified	0.01
30.403	exo-Fenchyl acetate	0.02
31.211	Methyl thymol ether	0.05
31.744	Nojigiku acetate	0.02
34.489	Phellandral	0.01
35.021	Bornyl acetate	32.18
35.131	Isobornyl acetate	0.13
35.515	Nonyl methyl ketone	0.05
36.444	Car-3-en-2-one	0.03
36.858	Unidentified	0.03
38.780	Unidentified	0.02
39.271	Unidentified	0.03
39.832	Neryl acetate	0.03
40.527	Ylangene	0.02
41.115	Geranyl acetate	0.22
42.703	Sibirene	0.04
43.107	Longifolene	0.09
43.169	Dodecanal	0.14
43.748	beta-Caryophyllene	1.08
45.653	alpha-Himachalene	0.04
45.989	alpha-Humulene	0.63
47.218	Unidentified	0.01
47.429	gamma-Himachalene	0.03

Chromatogram Siberian Fir Needle Oil Revive



Comments:

The analysis of this Siberian Fir Needle batch sample meets the expected chemical profile for authentic essential oil of *Abies sibirica*. No contamination or adulteration was detected. The results provided in this GC/MS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.

R.Time	Name	Area%
47.590	Unidentified	0.03
47.690	Unidentified	0.03
47.931	Unidentified	0.01
48.423	alpha-Alaskene	0.05
48.746	beta-Himachalene	0.03
49.239	beta-Bisabolene	0.13
49.418	cis-gamma-Bisabolene	0.04
49.846	delta-Cadinene	0.01
50.361	trans-gamma-Bisabolene	0.06
53.593	Caryophyllene oxide	0.06
55.212	Humulene epoxide II	0.03
55.980	Selina-6-en-4-ol	0.03
58.974	Cedrenyl acetate	0.02
59.490	Bisabolol isomer	0.07
59.611	alpha-Bisabolol	0.16
75.223	13-epi-Manoyl oxide	0.04
76.228	Unidentified	0.02
78.000	Unidentified	0.02
		100.00